

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

## 1 Identification

- **Product identifier**
- **Trade name:** RDO - GOLD DECALCIFIER
- **Article number:** 64144-01, 64144-06, 64144-40, 64144-44
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2B H320 Causes eye irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning

- **Hazard-determining components of labeling:**

hydrogen chloride

- **Hazard statements**

Harmful if swallowed.

Causes skin and eye irritation.

- **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

If skin irritation occurs: Get medical advice/attention.

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 1)

*If eye irritation persists: Get medical advice/attention.*

*If on skin: Wash with plenty of water.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7647-01-0	hydrogen chloride	2.5-10%
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### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
  - Dilute with plenty of water.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 7647-01-0 hydrogen chloride

PEL	Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm
REL	Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm
TLV	Ceiling limit value: 2.98 mg/m <sup>3</sup> , 2 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 3)

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Dark
<b>Odor:</b>	Recognizable
<b>Odour threshold:</b>	Not determined.

· **pH-value at 20 °C (68 °F):** < 3

· **Change in condition**

<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	101 °C (214 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

· **Density at 20 °C (68 °F):** 1.022 g/cm<sup>3</sup> (8.529 lbs/gal)

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 4)

· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	91.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

### · IARC (International Agency for Research on Cancer)

7647-01-0 | hydrogen chloride

3

### · NTP (National Toxicology Program)

None of the ingredients is listed.

### · OSHA-Ca (Occupational Safety Health Administration)

None of the ingredients is listed.

US

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 5)

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 1 (Self-assessment): slightly hazardous for water*  
*Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

- |  |                 |
|--|-----------------|
| <b>· Environmental hazards:</b>  |                 |
| <b>· Marine pollutant:</b>   | No              |
| <b>· Special precautions for user</b>  | Not applicable. |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

- **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

7732-18-5 | water, distilled, conductivity or of similar purity

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 6)

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0 | hydrogen chloride

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

hydrogen chloride

· **Hazard statements**

Harmful if swallowed.

Causes skin and eye irritation.

· **Precautionary statements**

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

If on skin: Wash with plenty of water.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 10/12/2015 / -

(Contd. on page 8)

**Safety Data Sheet**  
**acc. to OSHA HCS**

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 7)

**· Abbreviations and acronyms:**

*ACGIH: American Conference of Governmental Industrial Hygienists*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*  
*Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B*

US



**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** RDO - GOLD DECALCIFIER
- **Article number:** 64144-01, 64144-06, 64144-40, 64144-44
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: [www.emgrid.com.au](http://www.emgrid.com.au)
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning

(Contd. on page 2)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: **RDO - GOLD DECALCIFIER**

(Contd. of page 1)

- **Hazard-determining components of labelling:**  
hydrogen chloride
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wear protective gloves/protective clothing/eye protection/face protection.  
Use personal protective equipment as required.  
**IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Specific treatment (see on this label).  
If skin irritation occurs: Get medical advice/attention.  
If eye irritation persists: Get medical advice/attention.  
**IF ON SKIN:** Wash with plenty of water.  
Store in a well-ventilated place. Keep cool.  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

7647-01-0	hydrogen chloride	2.5-10%
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- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 3)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
  - Dilute with plenty of water.
  - Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Ensure adequate ventilation.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

7647-01-0 hydrogen chloride

NES Peak limitation: 7.5 mg/m<sup>3</sup>, 5 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.

(Contd. on page 4)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 3)

· **Respiratory protection:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*

· **Protection of hands:**

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.*

*Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

· **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.*

· **Penetration time of glove material**

*The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** Liquid

**Colour:** Dark

· **Odour:** Recognisable

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** < 3

· **Change in condition**

**Melting point/Melting range:** Undetermined.

**Boiling point/Boiling range:** 101 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Self-igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 1.022 g/cm<sup>3</sup>

· **Relative density** Not determined.

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 4)

· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	91.0 %
<b>VOC (EC)</b>	0.00 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 5)

- Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### 14 Transport information

- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Australian Inventory of Chemical Substances**  
7732-18-5 | water, distilled, conductivity or of similar purity
- **Standard for the Uniform Scheduling of Medicines and Poisons**  
None of the ingredients is listed.
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
hydrogen chloride
- **Hazard statements**  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.
- **Precautionary statements**  
Wear protective gloves/protective clothing/eye protection/face protection.

(Contd. on page 7)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 6)

*Use personal protective equipment as required.*

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Specific treatment (see on this label).*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*IF ON SKIN: Wash with plenty of water.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### **16 Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Abbreviations and acronyms:**

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*VOC: Volatile Organic Compounds (USA, EU)*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*

*Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

AU

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

## 1 Identification

- **Product identifier**
- **Trade name:** RDO - GOLD DECALCIFIER
- **Article number:** 64144-01, 64144-06, 64144-40, 64144-44
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Information department:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
.....  
Eye Irrit. 2B H320 Causes eye irritation.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Not applicable.



Irritant

Irritating to eyes.

- **Information concerning particular hazards for human and environment:**  
The product has to be labeled due to the calculation procedure of international guidelines.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **Labelling according to EU guidelines:**  
The product has been classified and marked in accordance with directives on hazardous materials.
- **Code letter and hazard designation of product:**



Irritant

- **Hazard-determining components of labeling:**  
hydrogen chloride

(Contd. on page 2)

CA



# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 1)

· **Risk phrases:**

Irritating to eyes.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

This material and its container must be disposed of as hazardous waste.

· **Hazard description:**

· **WHMIS-symbols:**

D2B - Toxic material causing other toxic effects



· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

7647-01-0	hydrogen chloride	5-10%
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### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** If symptoms persist consult doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 2)

- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

**7647-01-0 hydrogen chloride**

EL Ceiling limit value: 2 ppm

EV Ceiling limit value: 2 ppm

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 3)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Dark

· **Odor:** Recognizable

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** < 3

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 101 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not flammable.

· **Ignition temperature:**

Decomposition temperature: Not determined.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 4)

· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.022 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	91.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
---

7647-01-0	hydrogen chloride
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3

(Contd. on page 6)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 5)

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user:** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 6)

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

7732-18-5 | water, distilled, conductivity or of similar purity

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

7647-01-0 | hydrogen chloride

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

7732-18-5 | water, distilled, conductivity or of similar purity

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**



Irritant

· **Hazard-determining components of labeling:**

hydrogen chloride

· **Risk phrases:**

Irritating to eyes.

· **Safety phrases:**

Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

This material and its container must be disposed of as hazardous waste.

(Contd. on page 8)

CA

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/12/2015

Reviewed on 10/12/2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 7)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Date of preparation / last revision** 10/12/2015 / -

· **Abbreviations and acronyms:**

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

Acute Tox. 4: Acute toxicity, Hazard Category 4

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

CA

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** RDO - GOLD DECALCIFIER
- **Article number:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS07

Acute Tox. 4 H302 Harmful if swallowed.  
Skin Irrit. 2 H315 Causes skin irritation.  
Eye Irrit. 2 H319 Causes serious eye irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labelling:**  
hydrogen chloride
- **Hazard statements**  
H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
- **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P281 Use personal protective equipment as required.

(Contd. on page 2)



# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

**Trade name: RDO - GOLD DECALCIFIER**

(Contd. of page 1)

P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7647-01-0	hydrogen chloride	2.5-10%
EINECS: 231-595-7	☠ Acute Tox. 2, H330; ☠ Skin Corr. 1A, H314; Press. Gas L, H280	

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 2)

- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

## SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **8.1 Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

<b>7647-01-0 hydrogen chloride</b>	
WEL	Short-term value: 8 mg/m <sup>3</sup> , 5 ppm
	Long-term value: 2 mg/m <sup>3</sup> , 1 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 3)

## · Eye protection:



Tightly sealed goggles

### SECTION 9: Physical and chemical properties

## · 9.1 Information on basic physical and chemical properties

## · General Information

## · Appearance:

Form:	Liquid
Colour:	Dark
Odour:	Recognisable
Odour threshold:	Not determined.

· pH-value at 20 °C: &lt; 3

## · Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	101 °C

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

## · Ignition temperature:

Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

· Danger of explosion: Product does not present an explosion hazard.

## · Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

· Vapour pressure at 20 °C: 23 hPa

· Density at 20 °C: 1.022 g/cm<sup>3</sup>

· Relative density: Not determined.

· Vapour density: Not determined.

· Evaporation rate: Not determined.

## · Solubility in / Miscibility with water:

Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

## · Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

## · Solvent content:

Organic solvents:	0.0 %
Water:	91.0 %
VOC (EC)	0.00 %

(Contd. on page 5)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: RDO - GOLD DECALCIFIER

(Contd. of page 4)

· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Irritant

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 12.10.2015

Revision: 12.10.2015

Trade name: **RDO - GOLD DECALCIFIER**

(Contd. of page 5)

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| · <b>14.5 Environmental hazards:</b>  |                 |
| · <b>Marine pollutant:</b>  | No              |
| · <b>14.6 Special precautions for user</b>  | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**  
H280 Contains gas under pressure; may explode if heated.  
H314 Causes severe skin burns and eye damage.  
H330 Fatal if inhaled.
- **Abbreviations and acronyms:**  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
Press. Gas L: Gases under pressure: Liquefied gas  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Acute Tox. 2: Acute toxicity, Hazard Category 2  
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A  
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

GB

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

## RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

- **1.1 Productidentificatie**
- **Handelsnaam:** RDO - GOLD DECALCIFIER
- **Artikelnummer:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- Aurion  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: [info@aurion.nl](mailto:info@aurion.nl)
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



Acute Tox. 4 H302 Schadelijk bij inslikken.  
Skin Irrit. 2 H315 Veroorzaakt huidirritatie.  
Eye Irrit. 2 H319 Veroorzaakt ernstige oogirritatie.

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**  
Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.
- **Gevarenpictogrammen**



- **Signaalwoord** Waarschuwing
- **Gevaaraanduidende componenten voor de etikettering:**  
hydrogeenchloride

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 1)

- **Gevarenaanduidingen**

H302 Schadelijk bij inslikken.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

- **Veiligheidsaanbevelingen**

P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.

P281 De nodige persoonlijke beschermingsuitrusting gebruiken.

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P321 Specifieke behandeling vereist (zie op dit etiket).

P403+P235 Op een goed geventileerde plaats bewaren. Koel bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

- **2.3 Andere gevaren**

- **Resultaten van PBT- en zPzB-beoordeling**

- **PBT:** Niet bruikbaar.

- **zPzB:** Niet bruikbaar.

### RUBRIEK 3: Samenstelling en informatie over de bestanddelen

- **3.2 Chemische karakterisering: Mengsels**

- **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

- **Gevaarlijke inhoudstoffen:**

CAS: 7647-01-0	hydrogeenchloride	2,5-10%
EINECS: 231-595-7	 Acute Tox. 2, H330;  Skin Corr. 1A, H314; Press. Gas L, H280	

- **Aanvullende gegevens:**

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

### RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**

- **Na het inademen:** Frisse lucht toedienen; bij klachten arts ontbieden.

- **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid

- **Na oogcontact:**

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.

- **Na inslikken:** Als de klachten niet minderen, een arts raadplegen

- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**

- **Geschikte blusmiddelen:**

CO<sub>2</sub>, bluspoeder of waterstraal. Grottere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.

- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 3)



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 2)

- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Geen bijzondere maatregelen nodig.

### RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.
- **6.2 Milieuvorzorgsmaatregelen:**  
Met veel water verdunnen.  
Niet in de riolering/het oppervlaktewater/het grondwater laten terecht komen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**  
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.  
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**

- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

#### 7647-01-0 hydrogeenchloride

WGW	Korte termijn waarde: 15 mg/m <sup>3</sup> , 10 ppm
	Lange termijn waarde: 8 mg/m <sup>3</sup> , 5 ppm

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**  
Verwijderd houden van eet- en drinkwaren.  
Verontreinigde kleding onmiddellijk uittrekken.  
Vóór de pauze en aan het einde van werktijd handen wassen.  
Aanraking met de ogen vermijden.  
Aanraking met de ogen en de huid vermijden.

(Vervolg op blz. 4)



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 3)

**· Ademhalingsbescherming:**

Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

**· Handbescherming:**

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

**· Handschoenmateriaal**

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

**· Doordringingstijd van het handschoenmateriaal**

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

**· Oogbescherming:**


Nauw aansluitende veiligheidsbril

### RUBRIEK 9: Fysische en chemische eigenschappen

**· 9.1 Informatie over fysische en chemische basiseigenschappen**
**· Algemene gegevens**
**· Voorkomen:**

<b>Vorm:</b>	Vloeistof
<b>Kleur:</b>	Donker
<b>Reuk:</b>	Waarneembaar
<b>Geurdrempelwaarde:</b>	Niet bepaald.

**· pH-waarde bij 20 °C:** < 3

**· Toestandsverandering**

<b>Smeltpunt/smeltbereik:</b>	Niet bepaald.
<b>Kookpunt/kookpuntbereik:</b>	101 °C

**· Vlampunt:** Niet bruikbaar.

**· Ontvlambaarheid (vast, gasvormig):** Niet bruikbaar.

**· Ontstekingstemperatuur:**

**Ontbindingstemperatuur:** Niet bepaald.

**· Zelfonsteking:** Het produkt ontbrandt niet uit zichzelf.

**· Ontploffingsgevaar:** Het produkt is niet ontploffingsgevaarlijk.

**· Ontploffingsgrenzen:**

<b>Onderste:</b>	Niet bepaald.
<b>Bovenste:</b>	Niet bepaald.

**· Dampspanning bij 20 °C:** 23 hPa

**· Dichtheid bij 20 °C:** 1,022 g/cm<sup>3</sup>

**· Relatieve dichtheid** Niet bepaald.

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 4)

· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingssnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met Water:</b>	Volledig mengbaar.
· <b>Verdelingscoëfficiënt (n-octanol/water):</b>	Niet bepaald.
· <b>Viscositeit</b>	
<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
<b>Organisch oplosmiddel:</b>	0,0 %
<b>Water:</b>	91,0 %
<b>VOC (EG)</b>	0,00 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit**
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Geen prikkelend effect.
- **Ernstig oogletsel/oogirritatie** Prikkeling
- **Sensibilisatie van de luchtwegen/de huid** Geen effect van overgevoeligheid bekend.
- **Aanvullende toxicologische informatie:**  
Het produkt vertoont op grond van het berekeningsprocédé van de algemene classificatie-richtlijnen van de EG voor toebereidingen in de laatste geldige redactie de volgende gevaren:  
Irriterend

### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL) 11: Weinig schadelijk voor water levende organismen.  
Gevaar voor water klasse 1 (D) (Zelfclassificatie): gevaar voor water klein

(Vervolg op blz. 6)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 5)

- Niet onverdund of in grote hoeveelheden lozen in grondwater, in oppervlaktewater of in de riolering.
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
  - **PBT:** Niet bruikbaar.
  - **zPzB:** Niet bruikbaar.
  - **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.5 Milieugevaren:**
- **Marine pollutant:** Neen
- **14.6 Bijzondere voorzorgen voor de gebruiker** Niet bruikbaar.
- **14.7 Vervoer in bulk overeenkomstig bijlage II bij MARPOL 73/78 en de IBC-code** Niet bruikbaar.

### RUBRIEK 15: Regelgeving

- **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**
- **SZW-lijst van kankerverwekkende stoffen**  
geen der bestanddelen staat op de lijst.
- **SZW-lijst van mutagene stoffen**  
geen der bestanddelen staat op de lijst.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**  
geen der bestanddelen staat op de lijst.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**  
geen der bestanddelen staat op de lijst.
- **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**  
geen der bestanddelen staat op de lijst.
- **Richtlijn 2012/18/EU**
- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.
- **Nationale voorschriften:**
- **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL) 11: Saneringsinspanning B
- **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

-NL

(Vervolg op blz. 7)

**Veiligheidsinformatieblad  
volgens 1907/2006/EG, Artikel 31**

datum van de druk: 12.10.2015

Herziening van: 12.10.2015

**Handelsnaam: RDO - GOLD DECALCIFIER**

(Vervolg van blz. 6)

**RUBRIEK 16: Overige informatie**

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

**· Relevante zinnen**

H280 Bevat gas onder druk; kan ontploffen bij verwarming.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H330 Dodelijk bij inademing.

**· Afkortingen en acroniemen:**

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

Press. Gas L: Gases under pressure: Liquefied gas

Acute Tox. 4: Acute toxicity, Hazard Category 4

Acute Tox. 2: Acute toxicity, Hazard Category 2

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

### SECTION 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** RDO - GOLD DECALCIFIER
- **Code du produit:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS07

Acute Tox. 4 H302 Nocif en cas d'ingestion.  
Skin Irrit. 2 H315 Provoque une irritation cutanée.  
Eye Irrit. 2 H319 Provoque une sévère irritation des yeux.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.
- **Pictogrammes de danger**



GHS07

- **Mention d'avertissement** Attention
- **Composants dangereux déterminants pour l'étiquetage:**  
chlorure d'hydrogène
- **Mentions de danger**  
H302 Nocif en cas d'ingestion.  
H315 Provoque une irritation cutanée.  
H319 Provoque une sévère irritation des yeux.
- **Conseils de prudence**  
P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.

(suite page 2)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

**Nom du produit: RDO - GOLD DECALCIFIER**

(suite de la page 1)

- P281 Utiliser l'équipement de protection individuel requis.
- P305+P351+P338 **EN CAS DE CONTACT AVEC LES YEUX:** rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
- P321 Traitement spécifique (voir sur cette étiquette).
- P403+P235 Stocker dans un endroit bien ventilé. Tenir au frais.
- P501 Éliminer le contenu/réceptif conformément à la réglementation locale/régionale/nationale/internationale.

- **2.3 Autres dangers**
- **Résultats des évaluations PBT et vPvB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.

### SECTION 3: Composition/informations sur les composants

- **3.2 Caractérisation chimique: Mélanges**
- **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· **Composants dangereux:**

CAS: 7647-01-0	chlorure d'hydrogène	2,5-10%
EINECS: 231-595-7	☠ Acute Tox. 2, H330; ☠ Skin Corr. 1A, H314; Press. Gas L, H280	

- **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

### SECTION 4: Premiers secours

- **4.1 Description des premiers secours**
- **Après inhalation:** Donner de l'air frais, consulter un médecin en cas de troubles.
- **Après contact avec la peau:** En règle générale, le produit n'irrite pas la peau.
- **Après contact avec les yeux:**  
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, consulter un médecin.
- **Après ingestion:** Si les troubles persistent, consulter un médecin.
- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### SECTION 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:**  
CO<sub>2</sub>, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**  
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Aucune mesure particulière n'est requise.

### SECTION 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.

(suite page 3)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

**Nom du produit: RDO - GOLD DECALCIFIER**

(suite de la page 2)

- **6.2 Précautions pour la protection de l'environnement:**  
Diluer avec beaucoup d'eau.  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Assurer une aération suffisante.
- **6.4 Référence à d'autres sections**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### SECTION 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Eviter la formation d'aérosols.
- **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

### SECTION 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

<b>7647-01-0 chlorure d'hydrogène</b>
---------------------------------------

VME Valeur momentanée: 7,6 mg/m <sup>3</sup> , 5 ppm
--

- **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

- **8.2 Contrôles de l'exposition**

- **Equipement de protection individuel:**

- **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

Eviter tout contact avec les yeux.

Eviter tout contact avec les yeux et avec la peau.

- **Protection respiratoire:**

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

- **Protection des mains:**

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

(suite page 4)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

**Nom du produit: RDO - GOLD DECALCIFIER**

(suite de la page 3)

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

· **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

· **Protection des yeux:**



Lunettes de protection hermétiques

### SECTION 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

<b>Forme:</b>	Liquide
<b>Couleur:</b>	Foncé
<b>Odeur:</b>	Reconnaissable
<b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH à 20 °C:** < 3

· **Changement d'état**

<b>Point de fusion:</b>	Non déterminé.
<b>Point d'ébullition:</b>	101 °C

· **Point d'éclair** Non applicable.

· **Inflammabilité (solide, gazeux):** Non applicable.

· **Température d'inflammation:**

**Température de décomposition:** Non déterminé.

· **Auto-inflammation:** Le produit ne s'enflamme pas spontanément.

· **Danger d'explosion:** Le produit n'est pas explosif.

· **Limites d'explosion:**

<b>Inférieure:</b>	Non déterminé.
<b>Supérieure:</b>	Non déterminé.

· **Pression de vapeur à 20 °C:** 23 hPa

<b>Densité à 20 °C:</b>	1,022 g/cm <sup>3</sup>
<b>Densité relative</b>	Non déterminé.
<b>Densité de vapeur.</b>	Non déterminé.
<b>Vitesse d'évaporation</b>	Non déterminé.

· **Solubilité dans/miscibilité avec**

**l'eau:** Entièrement miscible

· **Coefficient de partage (n-octanol/eau):** Non déterminé.

(suite page 5)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

**Nom du produit: RDO - GOLD DECALCIFIER**

(suite de la page 4)

- |                                  |  |
|----------------------------------|--|
| <b>· Viscosité:</b>              |  |
| <b>Dynamique:</b>                | Non déterminé.                                     |
| <b>Cinématique:</b>              | Non déterminé.                                     |
| <b>· Teneur en solvants:</b>     |  |
| <b>Solvants organiques:</b>      | 0,0 %  |
| <b>Eau:</b>                      | 91,0 %   |
| <b>VOC (CE)</b>                  | 0,00 %   |
| <b>· 9.2 Autres informations</b> | Pas d'autres informations importantes disponibles. |

### SECTION 10: Stabilité et réactivité

- **10.1 Réactivité**
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

### SECTION 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée** Pas d'effet d'irritation.
- **Lésions oculaires graves/irritation oculaire** Effet d'irritation.
- **Sensibilisation respiratoire ou cutanée** Aucun effet de sensibilisation connu.
- **Indications toxicologiques complémentaires:**  
Selon le procédé de calcul de la dernière version en vigueur de la directive générale CEE sur la classification des préparations, le produit présente les dangers suivants:  
Irritant

### SECTION 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Autres indications écologiques:**
- **Indications générales:**  
Catégorie de pollution des eaux 1 (D) (Classification propre): peu polluant  
Ne pas laisser le produit, non dilué ou en grande quantité, pénétrer la nappe phréatique, les eaux ou les canalisations.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.

(suite page 6)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 12.10.2015

Révision: 12.10.2015

**Nom du produit: RDO - GOLD DECALCIFIER**

(suite de la page 5)

- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

### SECTION 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

### SECTION 14: Informations relatives au transport

- |  |                 |
|--|-----------------|
| · <b>14.5 Dangers pour l'environnement:</b>  |                 |
| · <b>Marine Polluant:</b>  | Non             |
| · <b>14.6 Précautions particulières à prendre par l'utilisateur</b>  | Non applicable. |
| · <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol 73/78 et au recueil IBC</b> | Non applicable. |

### SECTION 15: Informations réglementaires

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

### SECTION 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

- **Phrases importantes**
- H280 Contient un gaz sous pression; peut exploser sous l'effet de la chaleur.
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H330 Mortel par inhalation.
- **Acronymes et abréviations:**
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- Press. Gas L: Gases under pressure: Liquefied gas
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Acute Tox. 2: Acute toxicity, Hazard Category 2
- Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

überarbeitet am: 12.10.2015

### ABSCHNITT 1: Bezeichnung des Stoffs bzw. des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** RDO - GOLD DECALCIFIER
- **Artikelnummer:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
Tel: +49(0)89 18 93 668-0  
[safety@scienceservices.de](mailto:safety@scienceservices.de)  
  
24h Giftnotruf Munchen: +49 (0)89 19240  
Toxikologische Abteilung der II. Medizinischen Klinik  
rechts der Isar, Munchen. - [www.toxinfo.org](http://www.toxinfo.org)
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Eye Irrit. 2 H319 Verursacht schwere Augenreizung.

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS07

- **Signalwort** Achtung

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

überarbeitet am: 12.10.2015

**Handelsname: RDO - GOLD DECALCIFIER**

(Fortsetzung von Seite 1)

- **Gefahrbestimmende Komponenten zur Etikettierung:**

Hydrogenchlorid

- **Gefahrenhinweise**

H302 Gesundheitsschädlich bei Verschlucken.

H315 Verursacht Hautreizungen.

H319 Verursacht schwere Augenreizung.

- **Sicherheitshinweise**

P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.

P281 Vorgeschriebene persönliche Schutzausrüstung verwenden.

P305+P351+P338 **BEI KONTAKT MIT DEN AUGEN:** Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P403+P235 An einem gut belüfteten Ort aufbewahren. Kühl halten.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

- **2.3 Sonstige Gefahren**

- **Ergebnisse der PBT- und vPvB-Beurteilung**

- **PBT:** Nicht anwendbar.

- **vPvB:** Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**

- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- **Gefährliche Inhaltsstoffe:**

CAS: 7647-01-0	Hydrogenchlorid	2,5-10%
EINECS: 231-595-7	☠ Acute Tox. 2, H330; ☠ Skin Corr. 1A, H314; Press. Gas L, H280	

- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**

- **Nach Einatmen:** Frischluftzufuhr, bei Beschwerden Arzt aufsuchen.

- **Nach Hautkontakt:** Im allgemeinen ist das Produkt nicht hautreizend.

- **Nach Augenkontakt:**

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.

- **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.

- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**

Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**

- **Geeignete Löschmittel:**

CO<sub>2</sub>, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.

(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

überarbeitet am: 12.10.2015

**Handelsname: RDO - GOLD DECALCIFIER**

(Fortsetzung von Seite 2)

- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**  
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Keine besonderen Maßnahmen erforderlich.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:**  
Mit viel Wasser verdünnen.  
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.  
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.  
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.  
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

**7647-01-0 Hydrogenchlorid**

AGW	Langzeitwert: 3 mg/m <sup>3</sup> , 2 ml/m <sup>3</sup> 2(I);DFG, EU, Y
-----	--

- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**  
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

(Fortsetzung auf Seite 4)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

überarbeitet am: 12.10.2015

**Handelsname: RDO - GOLD DECALCIFIER**

(Fortsetzung von Seite 3)

Beschmutzte, getränkte Kleidung sofort ausziehen.  
 Vor den Pausen und bei Arbeitsende Hände waschen.  
 Berührung mit den Augen vermeiden.  
 Berührung mit den Augen und der Haut vermeiden.

• **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

• **Handschutz:**

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

• **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

• **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

• **Augenschutz:**



Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

• **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

• **Allgemeine Angaben**

• **Aussehen:**

<b>Form:</b>	Flüssigkeit
<b>Farbe:</b>	Dunkel
<b>Geruch:</b>	Wahrnehmbar
<b>Geruchsschwelle:</b>	Nicht bestimmt.

• **pH-Wert bei 20 °C:** < 3

• **Zustandsänderung**

<b>Schmelzpunkt/Schmelzbereich:</b>	Nicht bestimmt.
<b>Siedepunkt/Siedebereich:</b>	101 °C

• **Flammpunkt:** Nicht anwendbar.

• **Entzündlichkeit (fest, gasförmig):** Nicht anwendbar.

• **Zündtemperatur:**

**Zersetzungstemperatur:** Nicht bestimmt.

• **Selbstentzündlichkeit:** Das Produkt ist nicht selbstentzündlich.

• **Explosionsgefahr:** Das Produkt ist nicht explosionsgefährlich.

• **Explosionsgrenzen:**

**Untere:** Nicht bestimmt.

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

überarbeitet am: 12.10.2015

**Handelsname: RDO - GOLD DECALCIFIER**

(Fortsetzung von Seite 4)

<b>Obere:</b>	Nicht bestimmt.
· <b>Dampfdruck bei 20 °C:</b>	23 hPa
· <b>Dichte bei 20 °C:</b>	1,022 g/cm <sup>3</sup>
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
· <b>Löslichkeit in / Mischbarkeit mit Wasser:</b>	Vollständig mischbar.
· <b>Verteilungskoeffizient (n-Octanol/Wasser):</b>	Nicht bestimmt.
· <b>Viskosität:</b>	
<b>Dynamisch:</b>	Nicht bestimmt.
<b>Kinematisch:</b>	Nicht bestimmt.
· <b>Lösemittelgehalt:</b>	
<b>Organische Lösemittel:</b>	0,0 %
<b>Wasser:</b>	91,0 %
<b>VOC (EU)</b>	0,00 %
· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität**
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**  
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**
- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Keine Reizwirkung.
- **Schwere Augenschädigung/-reizung** Reizwirkung.
- **Sensibilisierung der Atemwege/Haut** Keine sensibilisierende Wirkung bekannt.
- **Zusätzliche toxikologische Hinweise:**  
Das Produkt weist aufgrund des Berechnungsverfahrens der Allgemeinen Einstufungsrichtlinie der EG für Zubereitungen in der letztgültigen Fassung folgende Gefahren auf:  
Reizend

### ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 6)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 12.10.2015

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**Handelsname: RDO - GOLD DECALCIFIER**

(Fortsetzung von Seite 5)

- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
Wassergefährdungsklasse 1 (Selbsteinstufung): schwach wassergefährdend  
Nicht unverdünnt bzw. in größeren Mengen in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

### ABSCHNITT 14: Angaben zum Transport

- |   |                  |
|---|------------------|
| · <b>14.5 Umweltgefahren:</b>   |                  |
| · <b>Marine pollutant:</b>  | Nein             |
| · <b>14.6 Besondere Vorsichtsmaßnahmen für den Verwender</b>  | Nicht anwendbar. |
| · <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens 73/78 und gemäß IBC-Code</b> | Nicht anwendbar. |

### ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **Nationale Vorschriften:**
- **Wassergefährdungsklasse:** WGK 1 (Selbsteinstufung): schwach wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**
- H280 Enthält Gas unter Druck; kann bei Erwärmung explodieren.
- H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

(Fortsetzung auf Seite 7)



**Sicherheitsdatenblatt**  
gemäß 1907/2006/EG, Artikel 31

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(Fortsetzung von Seite 6)

*H330 Lebensgefahr bei Einatmen.***Abkürzungen und Akronyme:***GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**Press. Gas L: Gases under pressure: Liquefied gas**Acute Tox. 4: Acute toxicity, Hazard Category 4**Acute Tox. 2: Acute toxicity, Hazard Category 2**Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A**Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2**Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

DE

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

### SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** RDO - GOLD DECALCIFIER
- **Articolo numero:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Usi pertinenti identificati della sostanza o miscela e usi sconsigliati** Non sono disponibili altre informazioni.
- **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio
- **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**
- **Produttore/fornitore:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Società Italiana Chimici**  
Via Rio Nell Ellba 140  
00138 Rome, Italy  
Tel: 39 06 8800211  
Fax: 39 30 06 8815313  
Web: www.sichim.com
- **Informazioni fornite da:** Product safety department
- **1.4 Numero telefonico di emergenza:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

- **2.1 Classificazione della sostanza o della miscela**
- **Classificazione secondo il regolamento (CE) n. 1272/2008**



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- Acute Tox. 4 H302 Nocivo se ingerito.
- Skin Irrit. 2 H315 Provoca irritazione cutanea.
- Eye Irrit. 2 H319 Provoca grave irritazione oculare.

- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008**  
Il prodotto è classificato ed etichettato conformemente al regolamento CLP.
- **Pittogrammi di pericolo**



GHS07

- **Avvertenza** Attenzione
- **Componenti pericolosi che ne determinano l'etichettatura:**  
cloruro di idrogeno
- **Indicazioni di pericolo**  
H302 Nocivo se ingerito.  
H315 Provoca irritazione cutanea.

(continua a pagina 2)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

**Denominazione commerciale: RDO - GOLD DECALCIFIER**

(Segue da pagina 1)

*H319 Provoca grave irritazione oculare.***· Consigli di prudenza**

- P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.
- P281 Utilizzare il dispositivo di protezione individuale richiesto.
- P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.
- P321 Trattamento specifico (vedere su questa etichetta).
- P403+P235 Conservare in luogo fresco e ben ventilato.
- P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

**· 2.3 Altri pericoli****· Risultati della valutazione PBT e vPvB****· PBT:** Non applicabile.**· vPvB:** Non applicabile.**SEZIONE 3: Composizione/informazioni sugli ingredienti****· 3.2 Caratteristiche chimiche: Miscela****· Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.**· Sostanze pericolose:**

CAS: 7647-01-0	cloruro di idrogeno	2,5-10%
EINECS: 231-595-7	☠ Acute Tox. 2, H330; ☠ Skin Corr. 1A, H314; Press. Gas L, H280	

**· Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16**SEZIONE 4: Misure di primo soccorso****· 4.1 Descrizione delle misure di primo soccorso****· Inalazione:** Portare in zona ben areata, in caso di disturbi consultare il medico.**· Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.**· Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.

**· Ingestione:** Se il dolore persiste consultare il medico.**· 4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.**· 4.3 Indicazione della eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

**SEZIONE 5: Misure antincendio****· 5.1 Mezzi di estinzione****· Mezzi di estinzione idonei:**CO<sub>2</sub>, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.**· 5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.**· 5.3 Raccomandazioni per gli addetti all'estinzione degli incendi****· Mezzi protettivi specifici:** Non sono richiesti provvedimenti particolari.**SEZIONE 6: Misure in caso di rilascio accidentale****· 6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.

(continua a pagina 3)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

**Denominazione commerciale: RDO - GOLD DECALCIFIER**

(Segue da pagina 2)

- **6.2 Precauzioni ambientali:**  
Diluire abbondantemente con acqua.  
Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**  
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).  
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**  
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.  
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
Per informazioni relative allo smaltimento vedere Capitolo 13.

### SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**  
Accurata ventilazione/aspirazione nei luoghi di lavoro.  
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.
- **7.2 Condizioni per l'immagazzinamento sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali specifici** Non sono disponibili altre informazioni.

### SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

**7647-01-0 cloruro di idrogeno**

TWA	Limite Ceiling: 2,9 mg/m <sup>3</sup> , 2 ppm A4
VL	Valore a breve termine: 15 mg/m <sup>3</sup> , 10 ppm Valore a lungo termine: 8 mg/m <sup>3</sup> , 5 ppm

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**  
Tenere lontano da cibo, bevande e foraggi.  
Togliere immediatamente gli abiti contaminati.  
Lavarsi le mani prima dell'intervallo o a lavoro terminato.  
Evitare il contatto con gli occhi.  
Evitare il contatto con gli occhi e la pelle.
- **Maschera protettiva:**  
Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**  
Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

(continua a pagina 4)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

**Denominazione commerciale: RDO - GOLD DECALCIFIER**

(Segue da pagina 3)

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

· **Materiale dei guanti**

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· **Tempo di permeazione del materiale dei guanti**

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· **Occhiali protettivi:**



Occhiali protettivi a tenuta

### SEZIONE 9: Proprietà fisiche e chimiche

· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

· **Indicazioni generali**

· **Aspetto:**

Forma: Liquido

Colore: Scuro

· **Odore:** Percettibile

· **Soglia olfattiva:** Non definito.

· **valori di pH a 20 °C:** < 3

· **Cambiamento di stato**

Temperatura di fusione/ambito di fusione: Non definito.

Temperatura di ebollizione/ambito di ebollizione: 101 °C

· **Punto di infiammabilità:** Non applicabile.

· **Infiammabilità (solido, gassoso):** Non applicabile.

· **Temperatura di accensione:**

Temperatura di decomposizione: Non definito.

· **Autoaccensione:** Prodotto non autoinfiammabile.

· **Pericolo di esplosione:** Prodotto non esplosivo.

· **Limiti di infiammabilità:**

Inferiore: Non definito.

Superiore: Non definito.

· **Tensione di vapore a 20 °C:** 23 hPa

· **Densità a 20 °C:** 1,022 g/cm<sup>3</sup>

· **Densità relativa** Non definito.

· **Densità del vapore** Non definito.

· **Velocità di evaporazione** Non definito.

· **Solubilità in/Miscibilità con acqua:**

Completamente miscibile.

(continua a pagina 5)

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ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

**Denominazione commerciale: RDO - GOLD DECALCIFIER**

(Segue da pagina 4)

· <b>Coefficiente di distribuzione (n-Octanol/acqua):</b>	Non definito.
· <b>Viscosità:</b>	
<b>Dinamica:</b>	Non definito.
<b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
<b>Solventi organici:</b>	0,0 %
<b>Acqua:</b>	91,0 %
<b>VOC (CE)</b>	0,00 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

- **10.1 Reattività**
- **10.2 Stabilità chimica**
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.
- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**
- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Non ha effetti irritanti.
- **Lesioni oculari gravi/irritazioni oculari gravi** Irritante.
- **Sensibilizzazione respiratoria o cutanea** Non si conoscono effetti sensibilizzanti.
- **Ulteriori dati tossicologici:**  
Il prodotto, in base al metodo di calcolo della direttiva generale della Comunità sulla classificazione dei preparati nella sua ultima versione valida, presenta i seguenti rischi:  
Irritante

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 1 (D) (Autoclassificazione): poco pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature non diluito o in grandi quantità.
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.

(continua a pagina 6)

**Scheda di dati di sicurezza**  
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 12.10.2015

Revisione: 12.10.2015

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(Segue da pagina 5)

· **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

### SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

### SEZIONE 14: Informazioni sul trasporto

- **14.5 Pericoli per l'ambiente:**
- **Marine pollutant:** No
- **14.6 Precauzioni speciali per gli utilizzatori** Non applicabile.
- **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL 73/78 ed il codice IBC** Non applicabile.

### SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Norme e legislazione su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

### SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Fraasi rilevanti**
- H280 Contiene gas sotto pressione; può esplodere se riscaldato.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H330 Letale se inalato.
- **Abbreviazioni e acronimi:**
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
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안전지침서  
제조조의와 2007/2006/E에 따라라따

기압점: 2015.10.12

개정: 2015.10.12

**1 화학제품과 회사에 관한 정보**

제품제품제자

· **제품명: RDO - GOLD DECALCIFIER**

· **상품번호:** 64144-01, 64144-06, 64144-40, 64144-44

해당해당해당질이나 혼합물어관련어용도 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

· **제품의 권고 용도와 사용상의 제한사항** 함 실험 실 화 학 품

· **안전데이터표(Safety Data Sheet)내 공급업체 관련 정보**

· **제조사/수입자/유통업체 정보**

Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com

Samchang Commercial Co., Ltd.  
Yeo Eui Do  
PO Box 1110  
Seoul, Korea  
Tel: 82 2 703 3040  
Fax: 82 2 717 3298

· **추가적인 정보** 등 제품 가능 duct safety department

· **비상연락 전화번호:**

ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

**2 유해성.위험성**

· **순물질 또는 혼합물어 분류분류**



심한 눈 손상/자극성 구분2 H319 눈에 심한 자극을 일으킴

· **라벨표가요소요소**

· **라벨표가요소요소**

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

· **그림문자**



GHS07

· **신호어 경고**

· **상표상에명확히위험성이표시된성분:**

hydrogen chloride

유해유해유해문구

눈에 심한 자극을 일으킴

· **예방조차문구문구**

(보호장갑·보호의·보안경·안면보호구)를(을) 착용하시오.

적절한 개인 보호구를 착용하시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면콘택트렌즈를 제거하시오. 계속 씻으시오.

(2 쪽에계속)





# 안전지침서

## 제조조의와 2006/EL에 따라라따

기압점: 2015.10.12

개정: 2015.10.12

**제품명: RDO - GOLD DECALCIFIER**

(2 쪽부터계속)

쓰 레 기 처 리 에 대 한 정 보 는 제 13 장 을 참 고 하 시 오.

### 7 취급 및 저장방법

취급 취급 취급

**안전** 안전을 위한 예방 조치

작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.

연무질이 형성되는 것을 피한다.

화재 화재를 예방하기 위해 대개에 관한 정보 별 한 조 치 가 필 요 없 음.

· 혼합 위험성: 혼합 시 주의 사항

보관 보관 보관

· 안전 방 저장 방법 별 한 요구 사항 이 없 음.

· 하 나 의 공 동 공 관 보 관 에 대 한 대 한 보 관 보 관 정 보 없 음

· 보 관 조 건 에 관 한 주 가 정 보 정 보 기 를 새 지 않 게 밀 폐 한 채 보 관 한 다.

· 구 체 정 보 최 종 최 종 자 주 가 적 인 정 보 가 존 재 하 지 않 습 니 다.

### 8 노출방지 및 개인보호구

· 첨단 시설 디자인에 대한 추가 정보: 더 이상 의 자료 는 없 음. 항 목 7 을 참 고 하 시 오.

통제 통제 통제 변수

· 화학 물질의 노출 기준, 생물학적 노출 기준 등:

7647-01-0 hydrogen chloride

PEL (USA) 최고 노출 기준: 7 mg/m<sup>3</sup>, 5 ppm

REL (USA) 최고 노출 기준: 7 mg/m<sup>3</sup>, 5 ppm

TLV (USA) 최고 노출 기준: 2.98 mg/m<sup>3</sup>, 2 ppm

· 추가 정보 정보 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 한 다.

노출 통제 통제 통제

개인 개인 보호 구

· 일반적 보호 조치 및 위생 조치:

· 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.

· 더러워지거나 음료가 묻은 옷은 즉시 탈의한다.

· 휴식 전이나 작업이 끝날 때마다 손을 씻는다.

· 눈과의 접촉을 피한다.

· 눈과 피부와의 접촉을 피한다.

· 호흡기 보호 보호

· 단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출 시에는

· 호흡 보호 장비를 사용한다.

· 손 보호 보호

· 장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.

· 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.

· 통과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· 장갑 의 재료

· 적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다

· 르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제가 이루어지는 것이기 때문에, 장갑재질의 안정성은 사

· 전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크되어야 한다.

· 장갑 재료의 통과 시간 정확한 관통 시간은 보호 장갑 제조자에 의 하여 인지 되고, 준수 되어야 한다.

(4 쪽에 계속)

# 안전지침서

## 제조조의와 2007/2006/EU에 따라라따

기압점: 2015.10.12

개정: 2015.10.12

**제품명: RDO - GOLD DECALCIFIER**

보호 보호 보호

(3 쪽부터 계속)



꼭조이는보안경

### 9 물리화학적 특성

기본 정보 물리화학적 특성에 대한 기본 정보

<b>· 일반정보</b>	
외형외형외형	액체
· 물리적 상태	어두운
· 색:	인지할 수 있는
냄새냄새냄새	알맞지 않다.
· 후각역치	
· pH 의 경우 20 °C:	< 3
· 상태변화	
· 녹는 점/어는 점:	맞지 않는다
· 초기 끓는 점과 끓는 범위	101 °C
· 인화점:	해당 사항 없음.
· 인화성 고체/기체	해당 사항 없음.
· 점화 온도:	
· 분해 온도	알맞지 않다.
· 자기점화:	이 제품은 자연발화성이 없다.
· 폭발 위험:	이 제품은 폭발 위험성이 없다
인화 안전 정보 폭발 위험성 상한 하한	
· 아래로:	알맞지 않다.
· 위로 위로	알맞지 않다.
· 증기압 의 경우 20 °C:	23 hPa
밀도 밀도 의 경우 20 °C:	1.022 g/cm <sup>3</sup>
· 비중 비중	알맞지 않다.
· 증기 밀도:	알맞지 않다.
· 증발 증발 속도	알맞지 않다.
· 용해도:	
· 물:	완전히 혼합할 수 있는
· n 옥탄올/물 분배계수:	알맞지 않다.
점도 점도 점도	
· 역학성:	알맞지 않다.
· 동점성:	알맞지 않다.
· 용매 내용물	
· 유기 용매:	0.0 %
· 물:	91.0 %
· VOC (EU)	0.00 %

(5 쪽에 계속)

# 안전지침서

## 제조조의와(2006/E)에 따라라따

기압점: 2015.10.12

개정: 2015.10.12

**제품명: RDO - GOLD DECALCIFIER**

(4 쪽부터계속)

기타정보정보 추가적인 정보가 존재하지 않습니다.

### 10 안정성 및 반응성

- 반응성
- 화학적 안정성
- 화학적 안정성 유해 반응의 가능성 / 피해야할조건조건에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야할조건조건 추가적인 정보가 존재하지 않습니다.
- 혼합 유해물질을 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

### 11 독성에 관한 정보

- 독성학적 영향에 대한정보
- 급성독성독성
- 일차적 자극효과
- 피부피부 자극성 또는 자극성: 무자극
- 심한심한 자극성 또는 자극성: 자극
- 감각화: 민감한영향이없는것으로알려져있다.
- 추가적인 독성에 관한정보
- 이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.
- 자극적인

### 12 환경에 미치는 영향

- 독성독성독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태정보정보
- 일반 열분해특징
- 수질오염등급 1 (자체등급분류): 약하게수질오염이된
- 희석시키지않은채대량으로지하수나, 하천으로그리고하수도망에도달하지않게한다.
- PBT(잔류성, 생물농축성, 물질물질물질)PvB(고 잔류성, 고 생물농축성, 물질물질물질)결과
- PBT(잔류성, 생물농축성, 물질물질물질)당사항 없음.
- vPvB(고 잔류성, 고 생물농축성, 물질물질물질)당사항 없음.
- 기타기타 부속용 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- 폐기물 처리방법
- 권고권고 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장포장
- 권고권고 당국의지침에입각한쓰레기처리.

(6 쪽에계속)

**안전지침서**  
제정: 2015.10.12 / 2006/E에 따라

기압점: 2015.10.12

개정: 2015.10.12

**제품명: RDO - GOLD DECALCIFER**

· 추천 세정제: 경우에 따라 세제가 첨가된 물

(5 쪽부터 계속)

**14 운송에 필요한 정보**

- 환경적 유해물질: 아니요
- 해양오염물질: 아니요
- 이동 시 특별 취급 조치: 해당사항 없음.
- MARPOL 73/78(선박으로부터의 해양오염방지협약) 부속서 2 및 IBC Code(국제선적화물코드)에 따른 벌크물질 운송 운송: 해당사항 없음.

**15 법적 규제 현황**

해당 해당 물질 또는 혼합물에 대한 안전성 평가에 관한 법적 규제를 받음

· Korean Existing Chemical Inventory		
7732-18-5	water, distilled, conductivity or of similar purity	KE-35400

- 라벨 라벨 라벨 요소
- 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

위험 위험 위험 도표



GHS07

- 표지어 경고
- 상표상에 명확히 위험성이 표시된 성분: hydrogen chloride
- 위험 위험 위험 문구  
눈에 심한 자극을 일으킴
- 주의 주의 주의 문구  
(보호장갑·보호의·보안경·안면보호구)를(을) 착용하십시오.  
적절한 개인 보호구를 착용하십시오.  
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.  
(라벨 참조) 처치를 하시오.  
환기가 잘 되는 곳에 보관하고 저온으로 유지하십시오  
현지/지역/국가/국제 규정에 따라서 내용물/용기 노출
- 화학물질 안전성 평가 평가 화학물질 안전성 평가가 수행되지 않음

**16 그 밖의 참고사항**

이 보고서는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

최초 최초 작성 일자: 2015.10.12  
개정 개정 개정 최종 개정 일자: 1 / 2015.10.12

- 약어와 두문자어:
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - ELINCS: European List of Notified Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)

(7 쪽에 계속)

# 안전지침서

제조조의와조/2006/E라에 따라라따

기압점: 2015.10.12

개정: 2015.10.12

## 제품명: RDO - GOLD DECALCIFIER

(6 쪽부터계속)

VOC: Volatile Organic Compounds (USA, EU)

고압가스(액화가스): Gases under pressure: Liquefied gas

급성 독성(흡입) 구분2: Acute toxicity, Hazard Category 2

피부 부식성/자극성 구분1: Skin corrosion/irritation, Hazard Category 1

심한 눈 손상/자극성 구분1: Serious eye damage/eye irritation, Hazard Category 1

심한 눈 손상/자극성 구분2: Serious eye damage/eye irritation, Hazard Category 2

KR

# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 12.10.2015

revidert den: 12.10.2015

## Avsnitt 1: Identifikasjon av kjemikaliyet og ansvarlig firma

- **1.1 Produktidentifikator**
- **Handelsnavn:** RDO - GOLD DECALCIFIER
- **Artikkelnummer:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Relevante, identifiserte anvendelser av stoffet eller stoffblandingen, samt anvendelser som frarådes**  
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Enkeltopplysninger om foretaket som leverer sikkerhetsdatabladet**
- **Produsent/leverandør:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## Avsnitt 2: Viktigste faremomenter

- **2.1 Klassifisering av stoff eller stoffblanding**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**



GHS07

- Acute Tox. 4 H302 Farlig ved svelging.  
Skin Irrit. 2 H315 Irriterer huden.  
Eye Irrit. 2 H319 Gir alvorlig øyeirritasjon.

- **2.2 Etikettelementer**
- **Merking iht. bestemmelse (EC) Nr. 1272/2008**  
Produktet er klassifisert og merket i henhold til CLP-forordningen.
- **Farepiktogrammer**



GHS07

- **Varselord** Advarsel
- **Farebestemmende komponenter ved etikettering:**  
hydrogenklorid, vannfritt
- **Faresetninger**  
H302 Farlig ved svelging.  
H315 Irriterer huden.  
H319 Gir alvorlig øyeirritasjon.
- **Sikkerhetssetninger**  
P280 Benytt vernehansker/verneklær/vernebriller/ansiktsskjerm.  
P281 Bruk påkrevd personlig verneutstyr.

(fortsatt på side 2)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkgdato: 12.10.2015

revidert den: 12.10.2015

### Handelsnavn: RDO - GOLD DECALCIFIER

(fortsatt fra side 1)

P305+P351+P338 VED KONTAKT MED ØYNENE: Skyll forsiktig med vann i flere minutter. Fjern eventuelle kontaktlinser dersom dette enkelt lar seg gjøre. Fortsett skyllingen.

P321 Særlig behandling (se på etiketten).

P403+P235 Oppbevares på et godt ventilert sted. Oppbevares kjølig.

P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.

- **2.3 Andre farer**
- **Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.

### Avsnitt 3: Stoffblandingers sammensetning og stoffenes klassifisering

- **3.2 Kjemisk karakterisering: Blandinger**
- **Beskrivelse:** Blanding av nedenstående oppførte stoffer med ufarlige tilsetninger.

#### · Farlige innholdsstoffer:

CAS: 7647-01-0	hydrogenklorid, vannfritt	2,5-10%
EINECS: 231-595-7	Acute Tox. 2, H330; Skin Corr. 1A, H314; Press. Gas L, H280	

- **Ytterligere informasjon:** Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

### Avsnitt 4: Førstehjelpstiltak

- **4.1 Beskrivelse av førstehjelpstiltak**
- **Etter innånding:** Frisklufttilførsel, ved besvær oppsøkes lege.
- **Etter hudkontakt:** Vanligvis irriterer produktet ikke huden.
- **Etter øyekontakt:**  
Skyll øynene med åpne øyenlokk i flere minutter under rennende vann. Ved fortsatt besvær tilkall lege.
- **Etter svelging:** Ved fortsatt besvær må lege konsulteres.
- **4.2 De viktigste symptomer og effekter, både akutt og forsinket** Ikke noe mer relevant informasjon tilgjengelig.
- **4.3 Indikasjon på omgående medisinsk hjelp eller påkrevet spesialbehandling**  
Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 5: Tiltak ved brannslukning

- **5.1 Slökkemiddel**
- **Egnede slukningsmidler:**  
CO<sub>2</sub>, slukningspulver eller vann i spredt stråle. Større branner bekjempes med vann i spredt stråle eller med skum som er motstandsdyktig mot alkohol.
- **5.2 Spesielle farer som oppstår pga. substanser eller blandinger** Ikke noe mer relevant informasjon tilgjengelig.
- **5.3 Informasjon vedr. brannbekjempelse**
- **Spesielt verneutstyr:** Ingen spesielle tiltak nødvendig.

### Avsnitt 6: Tiltak ved utilsiktet utslipp

- **6.1 Personlige vernetiltak, verneutstyr og prosedyrer ved nødsituasjoner** Ikke nødvendig.
- **6.2 Miljøverntiltak:**  
Fortynn med rikelig med vann.  
La ikke produktet komme ned i kloakk/overflatevann/grunnvann.
- **6.3 Metoder og materiale for oppsamling og opprensing:**  
Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).

(fortsatt på side 3)



# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 12.10.2015

revidert den: 12.10.2015

**Handelsnavn: RDO - GOLD DECALCIFIER**

(fortsatt fra side 2)

Sørg for tilstrekkelig ventilasjon.

· **6.4 Henvisning til andre avsnitt**

Informasjoner om sikker håndtering, se kapittel 7.

Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.

Informasjoner om bortskaffelse/deponering, se kapittel 13.

### Avsnitt 7: Håndtering og oppbevaring

· **7.1 Forholdsregler for sikker håndtering**

Sørg for god ventilasjon/avsugning på arbeidsplassen.

Unngå aerosoldannelse.

· **Henvisninger om brann- og eksplosjonsvern:** Ingen særlige tiltak nødvendig.

· **7.2 Vilkår for sikker lagring, inkl. eventuelle inkompatibiliteter**

· **Lagring:**

· **Krav til lagerrom og beholdere:** Ingen spesielle krav.

· **Informasjoner om felles lagring:** Ikke nødvendig.

· **Ytterligere informasjoner om lagervilkårene:** Hold beholderne tett tillukket.

· **7.3 Spesiell sluttbruk** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 8: Eksponeringskontroll og personlig verneutstyr

· **Ytterligere informasjoner om utforming av tekniske anlegg:** Ingen ytterligere informasjoner, se punkt 7.

· **8.1 Kontrollparametere**

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

**7647-01-0 hydrogenklorid, vannfritt**

AG	Takverdi: 7 mg/m <sup>3</sup> , 5 ppm
E	

· **Ytterligere informasjoner:** Basis: listene som var gyldige ved oppstillingen.

· **8.2 Begrensning og kontroll av eksponering**

· **Personlig verneutstyr:**

· **Generelle verne- og hygienetiltak:**

Holdes adskilt fra næringsmidler, drikkevarer og fórstoffer.

Fjern omgående forurensede, gjennomvætede klær.

Vask hendene før arbeidspauser og ved arbeidets slutt.

Unngå berøring med øynene.

Unngå berøring med øyne og hud.

· **Åndedrettsvern:**

Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.

· **Håndvern:**

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen.

På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblandingen.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

· **hanskemateriale**

Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjenner og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsberegnes, og denne må testes før bruk.

· **gjennomtrengingstid for hanskemateriale**

Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.

(fortsatt på side 4)

# Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 12.10.2015

revidert den: 12.10.2015

**Handelsnavn: RDO - GOLD DECALCIFIER**

(fortsatt fra side 3)

· Øyevern:



Tettsittende vernebrille

## Avsnitt 9: Fysiske og kjemiske egenskaper

### · 9.1 Informasjon om grunnleggende fysiske og kjemiske egenskaper

#### · alminnelige opplysninger

#### · Utseende:

Form:	Væske
Farge:	Mørk
Lukt:	Merkbar
Lukterskel:	Ikke bestemt.

· pH-verdi ved 20 °C: < 3

#### · Tilstandsendring

Smeltepunkt/smelteområde:	Ikke bestemt.
Kokepunkt/kokeområde:	101 °C

· Flammepunkt: Ikke brukbar.

· Antennelighet (fast, gassformet): Ikke brukbar.

#### · Antennelsestemperatur:

Spaltningsstemperatur: Ikke bestemt.

· Selvantennelighet: Produktet er ikke selvantennelig.

· Eksplosjonsfare: Produktet er ikke eksplosjonsfarlig.

#### · Eksplosjonsgrenser:

Nedre:	Ikke bestemt.
Øvre:	Ikke bestemt.

· Damptrykk ved 20 °C: 23 hPa

· Tetthet ved 20 °C: 1,022 g/cm<sup>3</sup>

· relativt tetthet: Ikke bestemt.

· damptetthet: Ikke bestemt.

· fordampningshastighet: Ikke bestemt.

· Løslighet i / blandbarhet med vann:

Fullstendig blandbar.

· Fordelingskoeffisient (n-oktanol/vann): Ikke bestemt.

#### · Viskositet:

Dynamisk:	Ikke bestemt.
Kinematisk:	Ikke bestemt.

#### · Løsningsmiddelandel:

Organiske løsningsmidler:	0,0 %
Vann:	91,0 %
VOC (EF)	0,00 %

(fortsatt på side 5)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 12.10.2015

revidert den: 12.10.2015

Handelsnavn: RDO - GOLD DECALCIFIER

(fortsatt fra side 4)

- **9.2 Annen informasjon** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet**
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Mulighet for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som bør unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Inkompatible materialer:** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytningsprodukter:** Ingen farlige spaltningsprodukter kjente.

### Avsnitt 11: Opplysninger om helsefare

- **11.1 Informasjon om toksikologiske virkninger**
- **Akutt giftighet**
- **Primær irriteringsvirkning:**
- **Hudetsing/hudirritasjon** Ingen irriterende virkning.
- **Alvorlig øyeskade/øyeirritasjon** Irriterende virkning.
- **Sensibiliserende ved innånding eller hudkontakt** Ingen sensibiliserende virkning kjent
- **Ytterligere toksikologiske henvisninger:**  
På bakgrunn av beregningsmetoden iflg. EF's generelle klassifiserings-retningslinje for tilberedninger i siste gyldige utgave oppviser produktet følgende farer:  
Irriterende

### Avsnitt 12: Miljøopplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumulasjonspotensial** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.
- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:**  
Vannfareklasse 1 (D) (Selvklassifisering): lett farlig for vann  
Ikke la stoffet komme ufortynnet ned i grunnvannet, i vassdrag eller i kloakker.
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadelige virkninger** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 13: Fjerning av kjemikalieavfall

- **13.1 Metoder for avfallsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.
- **Ikke rengjort emballasje:**
- **Anbefaling:** Deponering i henhold til myndighetenes forskrifter.

(fortsatt på side 6)

**Sikkerhetsdatablad**  
iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 12.10.2015

revidert den: 12.10.2015

**Handelsnavn: RDO - GOLD DECALCIFIER**

(fortsatt fra side 5)

· **Anbefalt rengjøringsmiddel:** Vann, eventuelt med tilsetning av rengjøringsmidler.**Avsnitt 14: Opplysninger om transport**· **14.5 Miljøfarer:**· **Marine pollutant:**

Nei

· **14.6 Særskilte forskriftsregler for bruker**

Ikke brukbar.

· **14.7 Transport i bulk iht. annek II til MARPOL 73/78 og til IBC-koden**

Ikke brukbar.

**Avsnitt 15: Opplysninger om lover og forskrifter**· **15.1 Helse-, sikkerhets- og miljøforskrifter/lovgivning som gjelder spesielt for stoffet eller stoffblandingen**  
Ikke noe mer relevant informasjon tilgjengelig.· **15.2 Kjemisk sikkerhetsvurdering:** En kjemisk sikkerhetsvurdering er ikke utført.**Avsnitt 16: Andre opplysninger av betydning for helse, miljø og sikkerhet**

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produktens egenskaper og er ikke grunnlag for noe kontraktsmessig rettsforhold.

· **Relevante satser**

H280 Inneholder gass under trykk; kan eksplodere ved oppvarming.

H314 Gir alvorlige etseskader på hud og øyne.

H330 Dødelig ved innånding.

· **Forkortelser og akronymer:**

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

Press. Gas L: Gases under pressure: Liquefied gas

Acute Tox. 4: Acute toxicity, Hazard Category 4

Acute Tox. 2: Acute toxicity, Hazard Category 2

Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

### SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

- **1.1 Identificador del producto**
- **Nombre comercial: RDO - GOLD DECALCIFIER**
- **Número del artículo:** 64144-01, 64144-06, 64144-40, 64144-44
- **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**  
No existen más datos relevantes disponibles.
- **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio
- **1.3 Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Aname**  
C/ Perez Galdos no. 2  
28693 Quijorna  
Madrid, Spain  
Tel: +34.91.816.89.50  
Fax: +34.91.816.85.94  
email: ventas@aname.es
- **Área de información:** Product safety department
- **1.4 Teléfono de emergencia:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECCIÓN 2: Identificación de los peligros

- **2.1 Clasificación de la sustancia o de la mezcla**
- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.  
Skin Irrit. 2 H315 Provoca irritación cutánea.  
Eye Irrit. 2 H319 Provoca irritación ocular grave.

- **2.2 Elementos de la etiqueta**
- **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**  
El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.
- **Pictogramas de peligro**



GHS07

- **Palabra de advertencia** Atención
- **Componentes peligrosos a indicar en el etiquetaje:**  
cloruro de hidrógeno

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

Nombre comercial: RDO - GOLD DECALCIFIER

( se continua en página 1 )

### · Indicaciones de peligro

- H302 Nocivo en caso de ingestión.
- H315 Provoca irritación cutánea.
- H319 Provoca irritación ocular grave.

### · Consejos de prudencia

- P280 Llevar guantes/prendas/gafas/máscara de protección.
- P281 Utilizar el equipo de protección individual obligatorio.
- P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.
- P321 Se necesita un tratamiento específico (ver en esta etiqueta).
- P403+P235 Almacenar en un lugar bien ventilado. Mantener en lugar fresco.
- P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

### · 2.3 Otros peligros

#### · Resultados de la valoración PBT y mPmB

- **PBT:** No aplicable.
- **mPmB:** No aplicable.

## SECCIÓN 3: Composición/información sobre los componentes

### · 3.2 Caracterización química: Mezclas

- **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

#### · Componentes peligrosos:

CAS: 7647-01-0	cloruro de hidrógeno	2,5-10%
EINECS: 231-595-7	 Acute Tox. 2, H330;  Skin Corr. 1A, H314; Press. Gas L, H280	

- **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

## SECCIÓN 4: Primeros auxilios

### · 4.1 Descripción de los primeros auxilios

- **En caso de inhalación del producto:** Suministrar aire fresco. En caso de trastornos, consultar al médico.
- **En caso de contacto con la piel:** Por regla general, el producto no irrita la piel.
- **En caso de con los ojos:**  
Limpiar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.
- **En caso de ingestión:** Consultar un médico si los trastornos persisten.
- **4.2 Principales síntomas y efectos, agudos y retardados** No existen más datos relevantes disponibles.
- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**  
No existen más datos relevantes disponibles.

## SECCIÓN 5: Medidas de lucha contra incendios

### · 5.1 Medios de extinción

#### · Sustancias extintoras apropiadas:

CO<sub>2</sub>, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

- **5.2 Peligros específicos derivados de la sustancia o la mezcla** No existen más datos relevantes disponibles.

( se continua en página 3 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

**Nombre comercial: RDO - GOLD DECALCIFIER**

( se continua en página 2 )

- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** No se requieren medidas especiales.

### SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** No es necesario.
- **6.2 Precauciones relativas al medio ambiente:**  
Diluir con mucha agua.  
Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.
- **6.3 Métodos y material de contención y de limpieza:**  
Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).  
Asegurar suficiente ventilación.
- **6.4 Referencia a otras secciones**  
Ver capítulo 7 para mayor información sobre una manipulación segura.  
Ver capítulo 8 para mayor información sobre el equipo personal de protección.  
Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

- **7.1 Precauciones para una manipulación segura**  
Asegurar suficiente ventilación /aspiración en el puesto de trabajo.  
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:** No se requieren medidas especiales.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**  
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.

#### · 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

#### 7647-01-0 cloruro de hidrógeno

LEP	Valor de corta duración: 15 mg/m <sup>3</sup> , 10 ppm
	Valor de larga duración: 7,6 mg/m <sup>3</sup> , 5 ppm
VLI	

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.
- **8.2 Controles de la exposición**
- **Equipo de protección individual:**
- **Medidas generales de protección e higiene:**  
Mantener alejado de alimentos, bebidas y alimentos para animales.  
Quitarse de inmediato la ropa ensuciada o impregnada.  
Lavarse las manos antes de las pausas y al final del trabajo.  
Evitar el contacto con los ojos.

( se continua en página 4 )



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

**Nombre comercial: RDO - GOLD DECALCIFIER**

( se continua en página 3 )

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· **Protección de manos:**

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· **Protección de ojos:**



Gafas de protección herméticas

### SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

Forma:

Líquido

Color:

Oscuro

· **Olor:**

Perceptible

· **Umbral olfativo:**

No determinado.

· **valor pH a 20 °C:**

< 3

· **Cambio de estado**

Punto de fusión /campo de fusión:

Indeterminado.

Punto de ebullición /campo de ebullición:

101 °C

· **Punto de inflamación:**

No aplicable.

· **Inflamabilidad (sólido, gaseiforme):**

No aplicable.

· **Temperatura de ignición:**

Temperatura de descomposición:

No determinado.

· **Autoinflamabilidad:**

El producto no es autoinflamable.

· **Peligro de explosión:**

El producto no es explosivo.

· **Límites de explosión:**

Inferior:

No determinado.

Superior:

No determinado.

· **Presión de vapor a 20 °C:**

23 hPa

( se continua en página 5 )



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

Nombre comercial: RDO - GOLD DECALCIFIER

( se continua en página 4 )

· <b>Densidad a 20 °C:</b>	1,022 g/cm <sup>3</sup>
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Velocidad de evaporación</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Completamente mezclable.
· <b>Coeficiente de reparto (n-octanol/agua):</b>	No determinado.
· <b>Viscosidad:</b>	
<b>Dinámica:</b>	No determinado.
<b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
<b>Disolventes orgánicos:</b>	0,0 %
<b>Agua:</b>	91,0 %
<b>VOC (CE)</b>	0,00 %
· <b>9.2 Información adicional</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad**
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** No produce irritaciones.
- **Lesiones o irritación ocular graves** Produce irritaciones.
- **Sensibilización respiratoria o cutánea** No se conoce ningún efecto sensibilizante.
- **Indicaciones toxicológicas adicionales:**  
En conformidad con el procedimiento de cálculo contenido en la última versión de la Normativa General de Clasificación de la CE para Preparados, el producto tiene los siguientes riesgos:  
Irritante

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.

( se continua en página 6 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 12.10.2015

Revisión: 12.10.2015

**Nombre comercial: RDO - GOLD DECALCIFIER**

( se continua en página 5 )

- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
*Nivel de riesgo para el agua 1 (autoclasiación): escasamente peligroso para el agua*  
*En estado no diluido o no neutralizado, no dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.*
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

### SECCIÓN 14: Información relativa al transporte

- **14.5 Peligros para el medio ambiente:**
- **Contaminante marino:** No
- **14.6 Precauciones particulares para los usuarios** No aplicable.
- **14.7 Transporte a granel con arreglo al anexo II del Convenio Marpol 73/78 y del Código IBC** No aplicable.

### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

- **Frases relevantes**  
H280 Contiene gas a presión; peligro de explosión en caso de calentamiento.  
H314 Provoca quemaduras graves en la piel y lesiones oculares graves.  
H330 Mortal en caso de inhalación.
- **Abreviaturas y acrónimos:**  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
VOC: Volatile Organic Compounds (USA, EU)  
Press. Gas L: Gases under pressure: Liquefied gas

( se continua en página 7 )

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*Acute Tox. 4: Acute toxicity, Hazard Category 4*  
*Acute Tox. 2: Acute toxicity, Hazard Category 2*  
*Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A*  
*Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2*  
*Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2*

( se continua en página 6 )

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